

What is claimed is:

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1. A method for generating a splice point adapter, comprising the steps of:
 - 5 identifying at least one out-frame within a transport stream, said out-frame representing a last frame of said transport stream to be included in a spliced transport stream;
 - decoding, for each identified out-frame, a respective portion of said transport stream including said out-frame; and
 - 10 re-encoding each decoded portion of said transport stream to produce a respective out-point adapter, each of said out-point adapters including a predefined terminating out-point condition.
 2. The method of claim 1, further comprising the steps of:
 - 15 identifying at least one in-frame within said transport stream, said in-frame representing a first frame of said transport stream to be included in a spliced transport stream;
 - decoding, for each identified in-frame, a respective portion of said transport stream including said in-frame; and
 - 20 re-encoding each decoded portion of said transport stream to produce a respective in-point adapter, each of said in-point adapters including an predefined initial in-point condition.
 3. The method of claim 1, further comprising the step of:
 - 25 associating each out-point with a respective out-point adapter, wherein, in the case of a concatenating an additional transport stream to said transport stream at a particular out-point, said decoded portion of said transport stream proximate said particular out-point is replaced by said out-point adapter associated with said particular out-point.
 - 30 4. The method of claim 2, further comprising the step of:

associating each in-point with a respective in-point adapter, wherein, in the case of a concatenating said transport stream to an additional transport stream at a particular in-point, said decoded portion of said transport stream proximate said particular in-point is replaced by said in-point adapter associated with said particular in-point.

5 5. The method of claim 1, wherein said decoded portion of said transport stream including said out-frame comprises said out-frame and all preceding frames, in display order, from said out-frame to a prior I-frame;

10 in the case of said out-frame comprising a B-frame, defining the frame immediately preceding said prior I-frame in transmission order as a final first transport stream frame in said transition stream; and

15 in the case of said out-frame not comprising a B-frame, defining said out-frame as said final first transport stream frame in said transition stream.

20 6. The method of claim 1, wherein said portion of transport stream including said in-frame to be decoded is determined according to the steps of:

20 decoding, in display order, said in-frame and all non-I-frames following said in-frame up to a next I-frame.

25 7. The method of claim 2, further comprising the step of indexing each of said transport stream, said step of indexing comprising the steps of:

25 parsing a transport layer of said transport stream to identify packets associated with at least one of sequence headers, picture headers and predefined splicing syntax; and

30 determining, for each frame in said transport stream, at least one of a picture number, a picture coding type, a start of frame transport packet number, an end of frame transport packet number, a presentation time stamp (PTS) and a decode time stamp (DTS).

8. The method of claim 7, wherein said determinations for each frame are stored in a meta file for subsequent use in generating a transition stream.

5 9. A method for generating a splice point adapter, comprising the steps of:

identifying at least one in-frame within a transport stream, said in-frame representing a first frame of said transport stream to be included in a spliced transport stream;

10 decoding, for each identified in-frame, a respective portion of said transport stream including said in-frame; and

re-encoding each decoded portion of said transport stream to produce a respective in-point adapter, each of said in-point adapters including an predefined initial in-point condition.

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10. The method of claim 9, further comprising the steps of:

identifying at least one out-frame within said transport stream, said out-frame representing a last frame of said transport stream to be included in a spliced transport stream;

20 decoding, for each identified out-frame, a respective portion of said transport stream including said out-frame; and

re-encoding each decoded portion of said transport stream to produce a respective out-point adapter, each of said out-point adapters including a predefined terminating out-point condition.

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11. The method of claim 10, further comprising the step of:

associating each out-point with a respective out-point adapter, wherein, in the case of a concatenating an additional transport stream to said transport stream at a particular out-point, said decoded portion of said transport stream proximate said particular out-point is replaced by said out-point adapter associated with said particular out-point.

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12. The method of claim 9, further comprising the step of:
associating each in-point with a respective in-point adapter, wherein,
in the case of a concatenating said transport stream to an additional
transport stream at a particular in-point, said decoded portion of said
5 transport stream proximate said particular in-point is replaced by said in-
point adapter associated with said particular in-point.

13. The method of claim 10, wherein said decoded portion of said
transport stream including said out-frame comprises said out-frame and all
10 preceding frames, in display order, from said out-frame to a prior I-frame;

in the case of said out-frame comprising a B-frame, defining the
frame immediately preceding said prior I-frame in transmission order as a
final first transport stream frame in said transition stream; and

15 in the case of said out-frame not comprising a B-frame, defining said
out-frame as said final first transport stream frame in said transition
stream.

14. The method of claim 9, wherein said portion of transport stream
including said in-frame to be decoded is determined according to the steps
20 of:

decoding, in display order, said in-frame and all non-I-frames
following said in-frame up to a next I-frame.

15. The method of claim 9, further comprising the step of indexing each of
25 said transport stream, said step of indexing comprising the steps of:

parsing a transport layer of said transport stream to identify packets
associated with at least one of sequence headers, picture headers and
predefined splicing syntax; and

30 determining, for each frame in said transport stream, at least one of a
picture number, a picture coding type, a start of frame transport packet
number, an end of frame transport packet number, a presentation time
stamp (PTS) and a decode time stamp (DTS).

16. The method of claim 15, wherein said determinations for each frame are stored in a meta file for subsequent use in generating a transition stream.

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17. In a system for processing transport streams, apparatus for generating a splice point adapter comprising:

a controller, for identifying at least one out-frame within a transport stream, said out-frame representing a last frame of said transport stream to
10 be included in a spliced transport stream;

a decoder, responsive to said controller, for decoding each identified out-frame, a respective portion of said transport stream including said out-frame; and

an encoder, for re-encoding each decoded portion of said transport
15 stream to produce a respective out-point adapter, each of said out-point adapters including a predefined terminating out-point condition.

18. The apparatus of claim 17, wherein:

said controller identifies at least one in-frame within said transport
20 stream, said in-frame representing a first frame of said transport stream to be included in a spliced transport stream;

said decoder decodes, for each identified in-frame, a respective portion of said transport stream including said in-frame; and

said encoder re-encodes each decoded portion of said transport
25 stream to produce a respective in-point adapter, each of said in-point adapters including an predefined initial in-point condition.

19. The apparatus of claim 17, wherein:

said controller associates each out-point with a respective out-point
30 adapter, wherein, in the case of a concatenating an additional transport stream to said transport stream at a particular out-point, said decoded

portion of said transport stream proximate said particular out-point is replaced by said out-point adapter associated with said particular out-point.

20. The apparatus of claim 18, wherein:

5 said controller associates each in-point with a respective in-point adapter, wherein, in the case of a concatenating said transport stream to an additional transport stream at a particular in-point, said decoded portion of said transport stream proximate said particular in-point is replaced by said in-point adapter associated with said particular in-point.

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21. The apparatus of claim 17, wherein said decoded portion of said transport stream including said out-frame comprises said out-frame and all preceding frames, in display order, from said out-frame to a prior I-frame;

15 in the case of said out-frame comprising a B-frame, said controller defines the frame immediately preceding said prior I-frame in transmission order as a final first transport stream frame in said transition stream; and

 in the case of said out-frame not comprising a B-frame, said controller defines said out-frame as said final first transport stream frame in said transition stream.

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22. The apparatus of claim 17, wherein said controller causes said decoder to decode, in display order, said in-frame and all non-I-frames following said in-frame up to a next I-frame to provide said portion of transport stream including said in-frame to be decoded.

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23. The apparatus of claim 18, wherein:

 said controller parses a transport layer of said transport stream to identify packets associated with at least one of sequence headers, picture headers and predefined splicing syntax; and

30 said controller determines, for each frame in said transport stream, at least one of a picture number, a picture coding type, a start of frame

transport packet number, an end of frame transport packet number, a presentation time stamp (PTS) and a decode time stamp (DTS).

24. The apparatus of claim 23, further comprising:

- 5 a memory, for storing within a meta file said controller determinations for each frame in said transport stream, said meta file intended for subsequent use in generating a transition stream.